

**REPLY AND AMENDMENT**

Atty. Dkt. No. 0618.004.0002

Serial No.: 10/071,512

Filing Date: February 8, 2002

Title: Methods of Light Activated Release of Ligands from Endosomes

**AMENDMENTS TO THE CLAIMS**

**Please amend the originally presented claims according to the changes indicated in the following claim listing.**

Claims 1-54 (Canceled)

55. (New) A method of delivering a double-stranded oligomer into the cytosol of a cell, said method comprising
- a) contacting said cell with said at least one double-stranded oligomer and a fluorophore, wherein said double-stranded oligomer is between about 20-30 nucleotides in length and said double-stranded oligomer and said fluorophore are taken up by said cell; and
  - b) irradiating said cell with radiant energy at a wavelength that activates said fluorophore,
- wherein said irradiating releases said at least one double-stranded oligomer into said cytosol of said cell.
56. (New) The method of claim 55, wherein said double-stranded oligomer comprises morpholino oligonucleotides.
57. (New) The method of claim 55, wherein said double-stranded oligomer comprises double-stranded RNA.
58. (New) The method of claim 57, wherein said fluorophore is selected from the group consisting of a fluorescein, a rhodamine, a cyanine and derivatives thereof.
59. (New) The method of claim 58, wherein said fluorophore is a fluorescein.
60. (New) The method of claim 57, wherein said fluorophore and double-stranded oligomer are simultaneously contacted with said cell.

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61. (New) The method of claim 60, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
62. (New) The method of claim 61, wherein said radiant energy is visible light.
63. (New) The method of claim 62, wherein said cell is irradiated for less than about 2 minutes.
64. (New) The method of claim 63, wherein said cell is irradiated for less than about 1 minute.
65. (New) The method of claim 64, wherein said visible light is produced from a flexible endoscopic light source.
66. (New) The method of claim 60, wherein said double-stranded oligomer and fluorophore are covalently linked to each other.
67. (New) The method of claim 66, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
68. (New) The method of claim 67, wherein said radiant energy is visible light.
69. (New) The method of claim 68, wherein said cell is irradiated for less than about 2 minutes.
70. (New) The method of claim 69, wherein said cell is irradiated for less than about 1 minute.
71. (New) The method of claim 70, wherein said visible light is produced from a flexible endoscopic light source.
72. (New) A method of delivering an oligomer into the cytosol of a cell, said method comprising

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- a) contacting said cell with said at least one oligomer and a fluorescently labeled transport peptide, wherein said oligomer and said fluorescently labeled transport peptide are taken up by said cell; and
  - b) irradiating said cell with radiant energy at a wavelength that activates said fluorescent label,
- wherein said irradiating releases said at least one oligomer into said cytosol of said cell.
- 73. (New) The method of claim 72, wherein said oligomer comprises morpholino oligonucleotides.
  - 74. (New) The method of claim 73, wherein said oligomer is double-stranded RNA.
  - 75. (New) The method of claim 74, wherein said fluorophore is selected from the group consisting of a fluorescein, a rhodamine, a cyanine and derivatives thereof.
  - 76. (New) The method of claim 75, wherein said fluorophore is a fluorescein.
  - 77. (New) The method of claim 76, wherein said peptide is substantially comprised of basic amino acids.
  - 78. (New) The method of claim 77, wherein said peptide is a poly-arginine peptide.
  - 79. (New) The method of claim 76, wherein said peptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:3.
  - 80. (New) The method of claim 79, wherein said peptide is the antennapedia protein.
  - 81. (New) The method of claim 79, wherein said peptide is the transportan protein.
  - 82. (New) The method of claim 76, wherein said peptide is VP22.
  - 83. (New) The method of claim 72, wherein said fluorescently labeled peptide and oligomer are simultaneously contacted with said cell.
  - 84. (New) The method of claim 83, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.

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85. (New) The method of claim 84, wherein said radiant energy is visible light.
86. (New) The method of claim 85, wherein said cell is irradiated for less than about 2 minutes.
87. (New) The method of claim 86, wherein said cell is irradiated for less than about 1 minute.
88. (New) The method of claim 87, wherein said visible light is produced from a flexible endoscopic light source.
89. (New) The method of claim 83, wherein said oligomer and fluorescently labeled peptide are covalently linked to each other.
90. (New) The method of claim 89, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
91. (New) The method of claim 90, wherein said radiant energy is visible light.
92. (New) The method of claim 91, wherein said cell is irradiated for less than about 2 minutes.
93. (New) The method of claim 92, wherein said cell is irradiated for less than about 1 minute.
94. (New) The method of claim 93, wherein said visible light is produced from a flexible endoscopic light source.